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RADIOLOGICAL IMPORTANCE IN DIAGNOSING AND CLASSIFYING PANCREATIC TUMOUR.

Radio-Diagnosis

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ABSTRACT

A wide spectrum of pathologies affect pancreas. Purpose of this exhibit is to demonstrate roll of radiology to distinguish between pancreatic tumours.
1= Adenocarcinoma of head of pancreas.
2= Neuroendocrine tumour of pancreas.
3= SPEN

KEYWORDS

Pancreatic Tumours, Case Series

INTRODUCTION:
Pancreatic tumours can result from genetic or disruptive mechanism. Alcohol alone is the crucial etiological factors for pancreatic tumours. Evaluation of pancreas with significant advancement in radiological techniques, both pre and post-operative cases have enabled better definition and classification. Here we demonstrate few cases in spectrum of pancreatic tumours, where correct differential diagnosis played a permanent importance, not only for clinical follow up & prognosis of patient, but also to appropriately counsel the families. Thus for each disorder, we shall emphasize on key radiological findings that were needed for diagnosis.

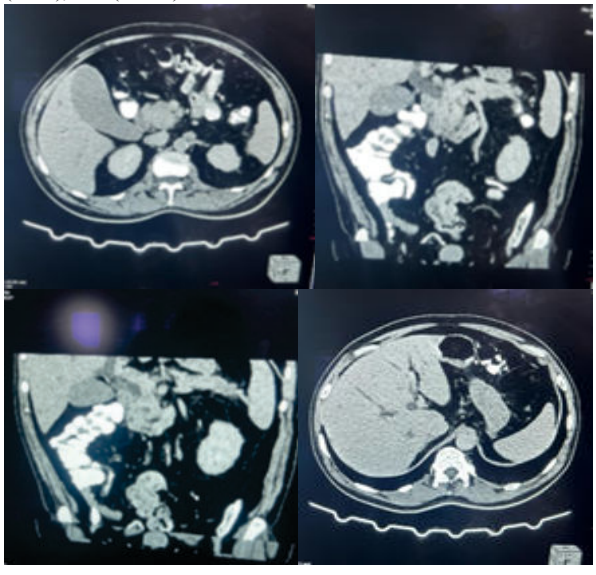
CASE SERIES:

CASE 1: Carcinoma of head of pancreas.
61 years old male with h/o CVA presented with complaints of
a) Pain in abdomen since 20days
b) Yellowish discoloration of skin and sclera since 1 week
c) Loss of weight over last 20 days

INVESTIGATIONS:

a) USG ABDOMEN
Grade 1 fatty liver with moderate central IHBRD,Dilated CBD at porta,Dilated MPD,Ill-defined lesion in periampullary region likely s/o Neoplastic etiology.

b) CT A+P
CT A+P-an Ill-defined hypodense lesion of approximate size 2.8x3.2cm in pancreatic head region with dilatation of pancreatic duct (5mm),CBD(11mm) and mild bilobar IHBRD.



Well defined rounded heterogeneously hypo enhancing lesion of size 3.2 x 2.8 cm noted in periampullary region involving head and neck of pancreas, causing mass effect in the form of upstream dilatation of CBD and MPD with mild central IHBRD. Few sub centric lymph nodes noted near head of pancreas. Fat plains with duodenum and jejunum are maintained.

EUS:
A heterogenous hypoechoic lesion of size 3x2.5cm seen in head and neck region of pancreas, PD dilated 5mm, EUS guided Biopsy done

Histopathology Report:
Linear bit showing pancreatic tissue with acini, fibrosis and ductal tissue.

Surgery:
Exploratory laparotomy with Whipple's procedure (pancreaticogastrostomy, hepaticojejunostomy and gastrojejunostomy)

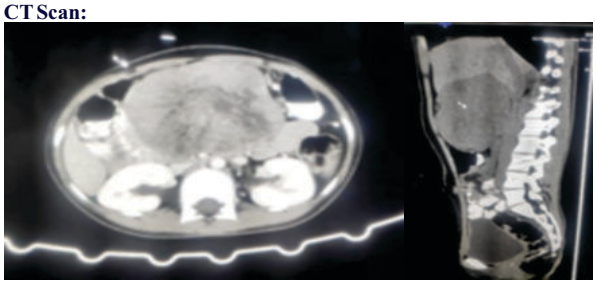
CASE 2: SPEN

Case history:
a) 14 years old girl
b) Presenting with c/o pain in Right hypochondriac region x 7 days
c) Associated with vomiting, non-projectile and non-bilious.
d) Consulted a local doctor who informed the patient about mass per abdomen

On examination:
a) Vitally stable
b) Per abdomen:
c) oval mass of 6x6 cm, firm to hard in consistency, smooth surface with regular margins.

Investigations:
a) Blood investigations are within normal limits
b) Upper GI: Extrinsic compression on posterior wall of stomach
c) USG:Large well defined heterogenous predominantly hypoechoic lesion measuring 10x9.2x7.8 cm seen adjacent to porta hepatis displacing stomach superior and laterally

CT Scan:

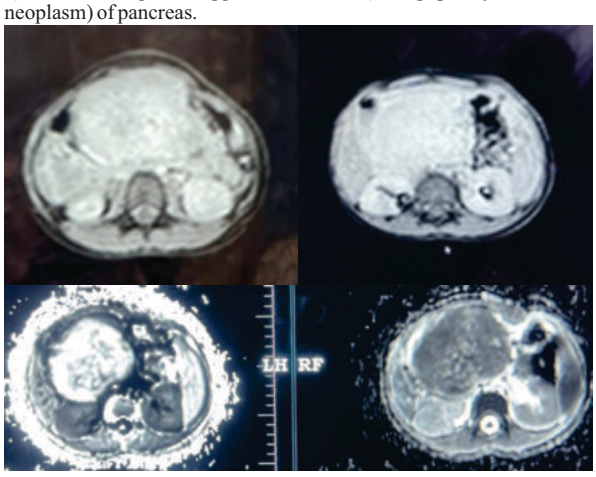


a) Large well defined solid mass lesion seen in mid abdominal region measuring 10.2 x 7.6 x 10.4 cm. Entire pancreas is not visualize separately from the lesion. Multiple dilated vessels noted within the lesion. The lesion is abutting the caudate of liver superiorly, displacement of lesser carvature of stomach anteriorly, displacement of D1 and D2 segment of duodenum laterally, displacement of transverse of colon inferiorly.

MRCP:

a)There is a large well defined solid mass lesion seen in mid abdominal region which appears T1 hypointense, T2 heterogeneously hyperintense, no blooming foci within with mild post contrast enhancement with delayed washout measuring 10.2 x 7.6 x 10.4 cm, entire pancreas is not visualised separately from the lesion. Multiple dilated vessels noted within the lesion.

b) Above findings are suggestive of SPEN (solid papillary endothelial neoplasm) of pancreas.



USG guided biopsy done:

a) Sample sent for histopath evaluation
b) HPE number 6489/22
c) Solid pseudopapillary tumor (Solid pseudopapillary epithelial neoplasm)

CASE 3: Neuroendocrine Tumor (NET) of pancreas

Case History:

15 years old patient with severe abdominal pain, hot flushes, giddiness, breathlessness, vomiting, per abdomen tenderness positive

Investigation:

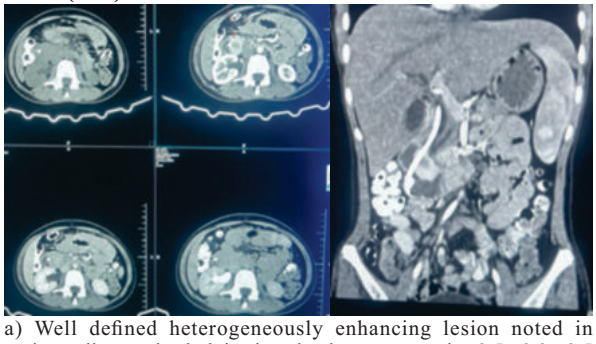
Fasting Blood Glucose: 40 mg/dl. (decreased)
Rest blood investigations are normal.

IHC	REPORT
synaptophysin-strong ,diffuse	positivity
chromogranin-strong ,diffuse	positivity

Ki-67-4.5%

Impression: Neuroendocrine tumour of intermediate grade.

CECT (A+P):



a) Well defined heterogeneously enhancing lesion noted in periampullary region bulging into duodenum measuring 3.5 x 2.9 x 2.5 cm.
b) Max. Diameter of CBD-0.9 cm. With CBD stent noted insitu. Mild central IHBRD with pneumobilia.

c) Iso-enhancing lobulated lymph nodal metastic mass measuring 2.4 x 1.7 x 1.6 cm, on the medial aspect of D2, superiorly abutting uncinate porocess of pancreas with loss of fat planes, posteriorly abutting IVC with loss of fat planes, inferiorly abutting proximal part of D3 with maintained fat planes.

CEUS of ampullary lesion:

a) Well defined lesion noted in D2 segment of duodenum measuring 3.1 x2.7 cm which on CEUS shows arterial enhancement with delayed washout; follows enhancement pattern similar to abdominal aorta.
b) two well defined lobulated lymph nodal masses seen adjacent to D2 segment on medial aspect inferior to head of pancreas measuring 2x1.2 cm and 1.3x 1.1 cm; shows early enhancement and early washout compared to abdominal aorta s/o metastatic lesion.

CONCLUSION:

Radiological imaging yields detailed anatomic findings & plays a key role in diagnosis of pancreatic tumors not only for clinical follow up & prognosis of patient, but also appropriately counsel the physician & patient.

CECT & MRCP is a promising method for Characterizing pancreatic tumors.

Radiological based diagnostic criteria are available for various disorders & should be used by Radiologist, Gastroenterologist & General surgeons.

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